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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PATEL, NIKETA I	

ART UNIT	PAPER NUMBER
2181	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,464	MOON, BRUCE	
	Examiner	Art Unit	
	Niketa I. Patel	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/1/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/12/05,8/16/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-13, 16, 17, 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Martinez et al. U.S. Patent Number: 5,790,782 (hereinafter "*Martinez*".)

3. **Referring to claim 1, 16, 17, 18**, *Martinez* teaches an apparatus for distributing a serial in a stackable unit [see figure 1, element 10, shelf 1-4], comprising: a first input connector of two or more input connectors [see column 4, line 18-21, 'input port or connector' and figure 1, elements 15]; a second input connector of two or more input connectors, wherein the first input connector is spaced apart from the second input connector [see figure 1, elements 15, shelf 1, shelf 2, each shelf has element 15 on the two opposite ends and each shelf has element 15 on bottom of the shelf and column 4, lines 59-65], and the first input connector has a particular spatial relationship to the second input connector [see figure 1, each shelf has element 15 on the two opposite ends and each shelf has element 15 on bottom of the shelf and column 1, lines 55-63]; a first output connector of two or more output connector [see column 4, line 18-21, 'input port or connector' and figure 1, elements 16]; a second output connector of two or more output connector, wherein the first output connector is spaced apart from the second output connector, and the first output connector has the same particular spatial relationship to the second output connector [see figure 1, each shelf has element 16 on the two opposite ends and each shelf has

element 16 on bottom of the shelf and column 1, lines 55-63 and column 4, lines 59-65]; means for commemoratively coupling the first input connector and the second output connector [see column 4, line 26-30 and figure 1, element 17]; and means for terminating the first output connector [see figure 1, element 16 on shelf M – note: since shelf M is the last shelf on the rack the outputs are *terminated.*]

4. **Referring to claim 4**, *Martinez* teaches wherein the two or more output connector comprise three or more output connectors; and wherein the apparatus further comprises a means for terminating a third output connector of the three or more output connectors, wherein the third output connector is spaced apart from both the first output connector and the second output connector [see figure 1, each shelf has elements 15, 16 on the two opposite ends and each shelf has element 15, 16 on bottom of the shelf.]

5. **Referring to claim 5**, *Martinez* teaches wherein an aggregate input connector comprises the two or more input connectors; and an aggregate output connector comprises the two or more output connectors [see figure 1, each shelf has elements 15, 16 on the two opposite ends and each shelf has element 15, 16 on bottom of the shelf.]

6. **Referring to claim 6**, *Martinez* teaches wherein the two or more input connectors are provided as two or more separate connectors and the two or more output connectors are provided as two or more separate connectors [see figure 1, each shelf has elements 15, 16 on the two opposite ends and each shelf has element 15, 16 on bottom of the shelf.]

7. **Referring to claim 7**, *Martinez* teaches wherein at least one of the two or more input connectors is located at one extreme of the apparatus and at least one of the two or more output connectors is located at a corresponding extreme on an opposite portion of the apparatus [see

figure 1, each shelf has elements 15, 16 on the two opposite ends and each shelf has element 15, 16 on bottom of the shelf.]

8. **Referring to claims 8**, *Martinez* teaches wherein the stackable unit is a stackable audio component, each of the two or more input connectors is capable of receiving an audio signal [see column 1, lines 41-50, 'RAID,' RAID is capable of storing audio data.]

9. **Referring to claim 9**, *Martinez* teaches wherein the stackable unit is a stackable video component, each of the two or more input connectors is capable of receiving a video signal [see column 1, lines 41-50, 'RAID,' RAID is capable of storing audio data.]

10. **Referring to claim 10**, wherein each connectors of the two or more input connectors and each connector of the two or more output connectors is capable of transmitting power and the second output connector is terminated by providing no power over the second output connector [see column 4, lines 51-65 and figure 1, element 16 on shelf M – note: since shelf M is the last shelf on the rack the outputs are *terminated.*]

11. **Referring to claim 11**, wherein the stackable unit is a stackable recording device and each connector of the two or more input connectors and each connector of the two or more output connectors is capable of transmitting a recordable signal and the means for terminating the second output connector comprises a means for transmitting a particular signal that indicates that the recordable signal is not being transmitted over the second output connector [see column 1, lines 41-50, 'RAID'.]

12. **Referring to claim 12**, wherein the second input connector of the two or more input connectors carries a particular signal, wherein the particular signal is a terminating signal and the apparatus further comprises a means for detecting the terminating signal [see column 4, lines 51-

65 and figure 1, element 16 on shelf M – note: since shelf M is the last shelf on the rack the outputs are *terminated.*]

13. **Referring to claim 13**, wherein each connector of the two or more input connectors and each connector of the two or more output connectors is capable of transmitting two or more signals [see column 4, lines 51-65 and figure 1, element 16 on shelf M – note: since shelf M is the last shelf on the rack the outputs are *terminated.*]

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez et al. U.S. Patent Number: 5,790,782 (hereinafter "*Martinez*") and further in view of Milan U.S. Patent No.: 6,843,684 B2 (hereinafter "*Milan*".)

16. **Referring to claim 2**, *Martinez* teaches wherein the stackable unit is a stackable hub, wherein the two or more output connectors, and wherein each of the two or more output connectors is disposed in a foot of the stackable hub [see column, lines and figure, element] and each of the two or more input connectors is disposed in a top portion of the stackable hub in a position substantially above a particular input connector of the two or more input connectors [see column, lines and figure, element] *Martinez* does not set forth the limitation of the two or more input connectors are USB connectors however, *Milan* teaches use of USB connectors since they

provide ability to connect up to 127 peripherals, the ability to automatically add and configure new devices and the ability to add such devices without having to shut down and restart the system [see *Milan* column 4, lines 2-18.]

One of ordinary skill in the art at the time of applicant's invitation would have clearly recognized that it is quite advantageous for the system of *Martinez's* to make use of USB connectors since they provide ability to connect up to 127 peripherals, the ability to automatically add and configure new devices and the ability to add such devices without having to shut down and restart the system. It is for this reason that one or ordinary skill in the art would have been motivated to use USB connector in *Martinez's* system because USB connectors provide ability to connect up to 127 peripherals, the ability to automatically add and configure new devices and the ability to add such devices without having to shut down and restart the system.

17. **Referring to claim 3**, *Martinez* teaches wherein the stackable unit is a stackable expansion module for network attached storage; the two or more output connectors; and each of the two or more output connectors is disposed in a foot of the stackable expansion module and each of the two or more input connectors is disposed in a top portion of the stackable expansion module in a position substantially above a particular input connector of the two or more input connectors. *Martinez* does not set forth the limitation of the two or more input connectors are USB connectors however, *Milan* teaches use of USB connectors since they provide ability to connect up to 127 peripherals, the ability to automatically add and configure new devices and the ability to add such devices without having to shut down and restart the system [see *Milan* column 4, lines 2-18.]

One of ordinary skill in the art at the time of applicant's invitation would have clearly recognized that it is quite advantageous for the system of *Martinez's* to make use of USB connectors since they provide ability to connect up to 127 peripherals, the ability to automatically add and configure new devices and the ability to add such devices without having to shut down and restart the system. It is for this reason that one or ordinary skill in the art would have been motivated to use USB connector in *Martinez's* system because USB connectors provide ability to connect up to 127 peripherals, the ability to automatically add and configure new devices and the ability to add such devices without having to shut down and restart the system.

18. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez et al. U.S. Patent Number: 5,790,782 (hereinafter "*Martinez*") and further in view of Rapport U.S. Patent No.: 6,955,945 B2 (hereinafter "*Rapport*".)

19. **Referring to claim 14**, *Martinez* teaches wherein the stackable unit with various types of units [see figure 1, element 10, shelf 1-4 and column 1, lines 46-49.] *Martinez* does not set forth the limitation of wherein the stackable unit is a microchip and wherein each connector of the two or more input connectors and each connector of the two or more output connectors comprises one or more pins on the microchip however *Rapport* discloses this limitation [see column 2, lines 32-40] to offer a system for stacking microchips that provides a thermally efficient, reliable structure that performs well at higher frequencies.

One of ordinary skill in the art at the time of applicant's invitation would have clearly recognized that it is quite advantageous for the system of *Martinez's* to provide user with

flexibility of having various types of units on a rack, such as, microchips to increase the processing power of a system. It is for this reason that one of ordinary skill in the art would have been motivated to use microchip as a stackable unit to increase the processing power of a system

20. **Referring to claim 15**, teachings of *Martinez* as modified by the teachings of *Rapport* above, teaches wherein each connector of the two or more input connector and each connector of the two or more output connectors is capable of transmitting a clock signal [see *Rapport* column 8, lines 40-56.]; and the means for terminating the second output connector comprises sending a signal other than the clock signal over the second output connector [see *Martinez* column 4, lines 51-65 and figure 1, element 16 on shelf M – note: since shelf M is the last shelf on the rack the outputs are *terminated.*]

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents have been made record of to further show the state of the art as it pertains to distributing a signal in stackable unit:

Milan U.S. Pat. No.: 6,726,509 B2

Sicola et al. U.S. Pat. No.: 6,920,511

Sicola et al. U.S. App. Pat. Pub. No.: 6,912,599 B2

Sicola et al. U.S. App. Pat. Pub. No.: 6,889,345

Coglitore et al. U.S. App. Pat. Pub. No.: 6,850,408 B1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niketa I. Patel whose telephone number is (571) 272 4156. The examiner can normally be reached on M-F 8:00 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (571) 272 4083. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
10/25/2005

HENRY W. H. TSAI
PRIMARY EXAMINER